Assessment of Kootenai National Forest Vegetation Types with Potential for *Silene spaldingii* in the Tobacco Plains, Rexford Bench and Salish Range Foothills

Prepared for:

Kootenai National Forest
Supervisor's Office

By:

S. V. Cooper

Montana Natural Heritage Program
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Executive Summary

Silene spaldingii (Spalding's catchfly) has relatively recently (October 10, 2001) been listed by the U. S. Fish and Wildlife Service as "Threatened" throughout its entire range. The Tobacco Valley of northwestern Montana harbors the largest known population (on TNC's Dancing Prairie Preserve) as well as several satellite populations of this species. Locating additional populations of this species, especially on Federal lands where appropriate management could be instituted, is a conservation priority. The Montana Natural Heritage Program contracted with the Kootenai National Forest to survey their land having the greatest probability of *S. spaldingii* populations. Putatively appropriate habitat, including mesic grasslands, shrublands, and open woodlands was inventoried, with grasslands receiving the most thorough search. No new populations of *S. spaldingii* were located but, in the course of inventory, a number of plant communities (associations) were sampled and described.

The communities of this landscape (Tobacco Valley vicinity and immediate foothills/mountainous terrain to the south) have not been previously described/documented, though limited sampling has occurred. A combination of coarse-textured outwash substrates and a relatively dry precipitation regime results in grasslands and shrublands where woodlands and forests might be expected. Environments supporting mesic grasslands where *S. spaldingii* would have the greatest likelihood of occurring have experienced the greatest disturbance (habitat conversion/destruction, alien species invasion); it is uncertain whether this disturbance could have resulted in population extirpation.

The rough fescue (*Festuca campestris*) grasslands found here are compositionally unlike those occurring anywhere else due to grazing effects and coarse substrates that combine to favor some graminoids more typically associated with the Great Plains. This combination of environment and vegetation has resulted in some unique communities not described elsewhere. New provisionally recognized grassland associations have been described. The presence of antelope bitterbrush (*Purshia tridentata*) in combination with both ponderosa pine (*Pinus ponderosa*) and *F. campestris* was additionally recognized in new shrubland and woodland plant associations (provisional).

Although our inventory was confined to U. S. Forest Service lands, it was abundantly obvious that this is a landscape under siege from alien plant species (whether classed weedy or not) and that Dancing Prairie Preserve and U. S. Forest Service lands will have to be the repositories of native biological diversity. While not explicitly evaluated, we note that a USFS prescribed burning program was achieving its intended effect of removing trees encroaching on grasslands and shrublands. The agency should pay particular attention to invasive species of alien grasses, particularly smooth brome (*Bromus iermis*); these grasses could be as threatening to diversity as noxious weeds.

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